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### **HURRICANES IRMA AND MARIA MANAGEMENT REPORT**

*Information contained in this report reflects HQ and regional reporting from the most recently completed operational period as well as other reports provided by HQ, regional and interagency sources.*

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#### **National Incident Management Objectives**

Objective 1: Ensure that health and safety of the EPA responders is considered at all times.

Objective 2: Establish an incident management structure and processes employing the Incident Command System to enable effective overall management of the event with deployment of resources (staff and equipment) in a rapid, aggressive and well-coordinated manner.

Objective 3: Ensure prompt Review and Processing of Fuel Waiver requests.

Objective 4: Prepare for and provide Rapid Assessment of Industrial facilities as requested by the State or under EPA's statutory program responsibilities for CERCLA Superfund, RMP and FRP facilities. Working with our state partners, contact industrial sources within the impacted area to determine their operational status and determine what support can be provided with the monitoring of the start-up of industrial sources.

Objective 5: Prepare for and provide Rapid Assessment & Technical Assistance Drinking Water & Wastewater facilities as requested by the State or local government. EPA will support our state partners in contacting drinking water and wastewater systems.

Objective 6: Prepare a Sustained Response Plan that outlines the resource and equipment needs for a long duration response.

Objective 7: Activate the Agency's Crisis Communication Plan to ensure effective and efficient coordination of all incident communications.

Objective 8: Encourage a collaborative federalism approach, where national, state and local governments interact cooperatively and collectively to solve common problems.

Objective 9: Begin Agency internal and external coordination under the National Disaster Recovery Framework regarding Recovery Support Functions in which EPA is likely to be involved.



## Executive Summary

*The new schedule for management reports will be Tuesday and Friday, starting the week of October 16<sup>th</sup>.*

### Region 2

- Tropical wave is moving away from Puerto Rico (PR) and U.S. Virgin Islands (USVI), however the southern end of the wave will bring more rain to islands through October 18<sup>th</sup>. The heaviest rain is expected over northern and eastern sections of PR and all of USVI. Flash Flood Warnings remain in effect for the Guajataca Dam region. There is high risk of river and small stream flooding as well as mudslides in areas of steep terrain. Urban flooding is also likely across low lying and poor drainage areas.
- EPA teams have assessed the Dorado Groundwater Contamination NPL site in Caguas where reports indicated residents might be extracting water from the wells on the sites.
  - **Site Security:** On October 16<sup>th</sup>, the Municipality of Dorado Mayor provided security personnel on site to prevent citizens from getting water from the wells and to encourage the citizens to use the Oasis established by PRASA as well as additional water sources provided by FEMA, DOD, FBI, and EPA at the well sites.
  - **Sample Results:** Analytical results for biologicals will be available on October 17<sup>th</sup>; additional results for chemical parameters will be available by October 20<sup>th</sup>.
- EPA teams continue to assess Superfund sites in PR including those where reports indicated residents might be extracting water from the wells on the sites. EPA public affairs and CIC staff are addressing media and community outreach actions to warn the public about accessing these sites.
- EPA contractors have developed plans to mobilize a barge with all the necessary equipment to support the debris MAs, using a FEMA transport for PR and USVI. For PR, FEMA estimates shipping of the equipment on October 19<sup>th</sup> with estimated arrival in PR on October 25<sup>th</sup>. For USVI, FEMA estimates shipment, via barge from Fort Lauderdale, Florida, to arrive in St. Thomas and St. Croix by the week of October 16<sup>th</sup>.
- As of October 17<sup>th</sup>, 34.6% of the Puerto Rico Aqueducts Sewer Authority (PRASA)-served population is without access to drinking water (DW) service; comparable data for USVI is not available. PR and USVI have island-wide boil water orders. In PR, 25% of the sewage treatment plants are not operational. In the USVI, damage to sewage systems was less severe, but plants do not have primary power, and lack sufficient generators or generator fuel.

### Region 4

- As of October 17<sup>th</sup>, Landfill Technical Specialists assessed 107 Disaster Debris Management Sites (DDMS) in the Florida Keys.
- As of October 17<sup>th</sup>, the EPA Container Recovery Group has recovered 362 items, including drums, oil containers, and propane tanks. These items are being stored for categorization and repackaging prior to recycling or disposal at the container staging area at the Florida Keys Marathon International Airport.
- As of October 17<sup>th</sup>, EPA and USCG field teams recovered 975 vessels of the 2,427 identified vessels—1,452 vessels remain.
- As of October 13<sup>th</sup>, planned construction and demolition debris (C&D), waste reduction activities earmarked for the 47<sup>th</sup> Street DDMS have been halted due to concerns regarding the potential presence of asbestos. The City has proposed hiring a qualified asbestos consultant to identify and remove asbestos containing material from the C&D waste pile prior to grinding.



**Regional Mission Assignments and Funding**

<b>EPA Region</b>	<b>Mission Assignment Number</b>	<b>Funding Amount</b>	<b>Description of Assignment</b>
Region 2	4339DR-PR-EPA-04	\$6,000,000	To deploy personnel to coordinate and execute all necessary assessments, evaluations, sampling and analysis services/support and other necessary actions associated with ensuring the safety and quality of DW and WW systems, in support of PRASA, Puerto Rico Department of Health (PRDH).
	4339DR-PR-EPA-03*	\$10,000,000	Removal, cleanup and disposal of oil and hazmat; collect and dispose of HHW; monitor immediate threats to public H&S and the environment in PR.
	VI-17090102-EPA-01	(\$10,000)	Expired
	4335DR-VI-EPA-01	(\$100,000)	Expired
	4335DR-VI-EPA-02	\$1,008,000	To perform assessment of oil and hazardous materials releases, contaminated debris and other environmental events in USVI.
	4335DR-VI-EPA-04	\$10,000,000	Conduct oil and hazardous materials field operations, including cleanup and disposal of hazardous materials and oil, and response to orphaned containers in order to mitigate actual and potential threats to public health and safety.
	4335DR-VI-EPA-06	\$2,000,000	EPA provides support preparing for site-specific platforms for situational awareness; environmental data management; operational deployment plans; documentation of assessment activities and results; resource and financial tracking, accountability and cost documentation.
	PR-17090102-EPA-01	(\$20,000)	Expired
	3384EM-PR-EPA-01	(\$75,000)	Expired
	4336DR-PR-EPA-01	(\$125,000)	Expired
	4336DR-PR-EPA-02	\$1,008,000	To perform assessment and reconnaissance of oil and hazardous materials release, contaminated debris and storm impacted infrastructure which may pose a threat to federal responders, as well as, environmental harm in PR.
	4339DR-PR-EPA-01	\$303,000	EPA to FEMA NRCC or PR JFO/EOC
	4340DR-VI-EPA-01	\$130,000	EPA to FEMA NRCC or USVI JFO/EOC
	4340DR-VI-EPA-04	\$2,100,000	EPA to RRCC, JFO, EPA REOC, State EOC and other coordination venues to support FEMA response operations in the USVI
Region 4	4337DR-FL-EPA-05	\$90,000	Activation for appropriate EPA personnel to perform the functions of ESF-10 w/ RRCC, IOF, JFO, FEMA's Incident Management Assistance Team (IMAT), Preliminary Damage Assessment (PDA) Team, or other teams and locations, at the direction and coordination of FEMA.



EPA Region	Mission Assignment Number	Funding Amount	Description of Assignment
	4337DR-FL-EPA-03	(\$525,000)	Expired
	4337DR-FL-EPA-04	(\$9,000,000)	Expired
	4337DR-FL-EPA-07	(\$675,000)	Expired
	4337DR-FL-EPA-08	\$10,000,000	Provide oil and hazardous material field response in support of FEMA response operations providing specialized expertise, conducting damage assessment of oil/hazmat waste impact evaluating hazards; and/or response, removal, or disposal of actual and potential oil discharges, and releases of hazardous substances, pollutants and contaminants and remove pollutants from vessels in or upon navigable waters and adjoining shorelines through November 30 <sup>th</sup> with a state cost share of 10%.
	4337DR-FL-EPA-09	\$675,000	Provide funding for EPA Landfill Specialty Teams through November 30 <sup>th</sup> with a state cost share of 10%.
Total Active MAs		\$43,314,000	

\*A signed MA task order documenting the additional task requested by the PR Solid Waste Authority was received.

#### Total Number of Regional Personnel Involved in Response

Type	R2 Personnel	R4 Personnel	Total Regional Personnel
EPA	179	27	206
Contractors	96	37	133
Totals	275	64	339

#### Force Laydown for USVI\* and PR (as reported by Region 2 on October 17<sup>th</sup>)

- Region 2 has entered resource orders into the WebEOC Personnel Resource Log.

Type	Personnel USVI	Personnel PR	Total Deployment
EPA*	18	84	102
Contractors	47	26	73
Totals	65	110	175

\*These numbers include CEPD personnel

#### Region 2 Significant Activities

- As of October 17<sup>th</sup>, disease outbreaks have been reported in numerous municipalities (diarrhea, conjunctivitis, vector-borne diseases etc.). PR Department of Health (PRDH) has confirmed 10 active cases of leptospirosis and 2 deaths due to the disease.
- On October 15<sup>th</sup>, two medical incidents (one resulting in a fatality) occurred inside a common area inside the Carambola hotel on St. Croix, USVI—a hotel



that is lodging EPA personnel. The fatality appears to be the result of a personal medical issue and not attributable to environmental factors. EPA has been working with FEMA for the past several days to get all our responders on the cruise ships. The other medical incident resulted in a full recovery and the FEMA responder has been demobilized.

#### Superfund and Oil Sites

- There are 34 Superfund and oil sites (30 in PR and 4 in USVI). The Regional Emergency Operations Center (REOC) is contacting the RPMs for each site and working with Region 2's Emergency and Remedial Response Division to provide updates.

SUPERFUND SITES (NPL, Removal, and Oil)						
Site	Type	Phase 1	Phase 2		Phase 3	All Phases Completed
		Post-Storm Assessment	Site Inspection Needed	Inspected	Additional Response Action	
PUERTO RICO						
Atlantic Fleet Weapons Training Area (Vieques)	NPL					
Barceloneta Landfill	NPL					
Arecibo Battery Recycling Co.	Removal & NPL*	09/22	No	-	No	09/22
Cabo Rojo Groundwater Contamination	NPL					
Cidra Groundwater Contamination	NPL	10/05	No	-	No	10/05
Corozal Well	Removal & NPL*	09/24	No	-	No	09/24
Culebra	Other					
Dorado Groundwater Contamination	NPL	10/12	Yes			
Fibers Public Supply Wells	NPL	10/05	Yes			
Fort Buchanan	Other	10/06	No	-	No	10/06
Frontera Creek	NPL	10/05	No	-	No	10/05
GE Wiring Devices	NPL	10/06	Yes			



SUPERFUND SITES (NPL, Removal, and Oil)						
Site	Type	Phase 1	Phase 2		Phase 3	All Phases Completed
		Post-Storm Assessment	Site Inspection Needed	Inspected	Additional Response Action	
Guayanilla Bay Oil Spill	Oil	10/06	Yes			
Hormigas Groundwater Plume	NPL	10/06	Yes			
Jansen, Inc.	Other	10/06	No	-	No	10/06
Juncos Landfill	NPL	09/30	Yes	10/05	No	10/05
Maunabo Urbano Public Wells	NPL	10/12	No	-	No	10/12
Naval Security Group Activity	Other	10/06	No	-	No	10/06
Papelera Puertorriqueña, Inc.	NPL	09/29	No	-	No	09/29
Pesticide Warehouse 1	NPL	10/04	Yes			
Pesticide Warehouse 3	NPL	10/04	Yes			
Prepa Palo Seco General Depot	Other	10/12	No	-	-	10/12
Puerto Rico Olefins	Other	10/11	Yes			
Puma Caribe (CAPECO)	Oil Response	09/21	No	-	No	09/21
RCA Del Caribe	NPL					
San German Groundwater Contamination	NPL	10/12	Yes			
Scorpio Recycling Inc.	NPL	10/05	Yes			
U.S. Naval Station	Other	10/06	No	-	No	10/06
Upjohn Facility	NPL	09/30	Yes			
V&M Albaladejo	NPL	10/12	No	-	-	10/12
Vega Alta Public Supply Wells	NPL	09/30	Yes			



SUPERFUND SITES (NPL, Removal, and Oil)						
Site	Type	Phase 1	Phase 2		Phase 3	All Phases Completed
		Post-Storm Assessment	Site Inspection Needed	Inspected	Additional Response Action	
Vega Baja Solid Waste Disposal	NPL	10/04	No	-	No	10/04
				USVI		
Cruz Bay Oil Tank	Oil	10/09	Yes	10/11	Yes	
Island Chemical Corp/Virgin Islands Chemical Corp	NPL	10/05	No	-	No	10/05
Krum Bay Oil Spill at WAPA Facility	Oil	10/01	No	-	No	10/01
Tutu Wellfield	NPL	10/03	Yes			

#### Regulated Facilities in PR and USVI

- The Regulated Facility Team (RFT) continues to provide effective compliance assistance to Risk Management Plan (RMP), Facility Response Plans (FRP), and Spill Prevention, Control and Countermeasures (SPCC) regulated facilities. Several significant RMP, FRP, and SPCC companies in PR and the USVI, such as Puma, PRASA, Total, and Water and Power Authority (WAPA) have reported no damage to oil, chemical, or flammable operations.
- In the USVI, Virgin Island Asphalt Products facility was found to have sustained significant damage. Damage to some oil tanks was observed with discharges of product to secondary containment. The facility owner is addressing the issues with EPA oversight.

Facility Type	Total Field Assessments Completed to date	Total # of Facilities to be Assessed
<b>Puerto Rico</b>		
RMP	73	56
FRP	29	23
SPCC (non-FRP)	106	0 *
Total	208	79
<b>USVI</b>		
RMP	1	1
FRP	6	6
SPCC (non-FRP)	42	0*
Total	49	7

\* Total number of SPCC facilities assessed is identified by impacted geographic areas.



### Drinking Water/Wastewater (DW/WW) Assessments in PR

- PRASA facility assessments are ongoing with EPA staff participating in PRASA facility assessments.
  - Out of PRASA's 51 facilities, 9 wastewater treatment plants (WWTPs) are non-operational, 5 of which are upstream of a drinking water intake. These facilities represent a high priority for assessment and repair.
  - Assessments are complete at around 80% of PRASA's 800 pump stations. As of October 17<sup>th</sup>, at least 286 sanitary pump stations are overflowing sewage due to lack of power, malfunctioning power generator or pumping problems. Of these 292 pump stations, 104 are located upstream of a water supply intake. PR's largest pump station, Torrecillas Pump Station, suffered major damages due to flooding.
  - 88 WTPs are working on alternate power or primary power.

Drinking Water and Wastewater Assessments on PR (as of October 15 <sup>th</sup> )		
Assessment Types	Daily Assessments	Total Assessments
On-Site DW Assessments	14	74
On-Site WW Assessments	0	138

- Non-PRASA drinking water facilities serve approximately 4% of the PR populations (PRASA systems service the other 96%). EPA is working with PRDOH, DOD, HHS, and FEMA, in assessing the non-PRASA drinking water systems throughout PR. Such systems provide drinking water from wells and surface water to isolated communities located in rural areas in PR.

### Drinking Water/Wastewater (DW/WW) Assessments in USVI

- A boil water advisory remains in place across the USVI.
- EPA continues to coordinate drinking water sampling with DPNR. DPNR continues to notify the proprietors of the affected systems to ensure proper disinfection measures are taken.

Drinking Water and Wastewater Assessments on USVI (as of October 15 <sup>th</sup> )		
Assessment Types	Daily Assessments	Total Assessments
On-Site DW Assessments	12	500
On-Site WW Assessments	4	14

### PR and USVI Air Monitoring Activities

- The PR EQB plans to conduct an assessment on the conditions of the ambient air monitoring network. The network went offline prior to Hurricane Maria's landfall. There is no update or information on the status or damages. EQB will staff an assessment team once their employees are available.
- In St. Thomas and St. Croix, EPA—as reported by R2's on October 17<sup>th</sup>-- has been requested by FEMA and DPNR to assess air quality in schools. EPA has completed air monitoring in St. Croix and determined no further monitoring is necessary.
- USACE has requested EPA assistance with air monitoring during the USACE's air curtain burning of vegetative debris activities.

### PR Debris Recovery



- EPA is adding a Hazardous Debris Assessment Team to each of the three field branches to coordinate with CEPD and USACE. These teams have a list of the landfills and other locations identified by CEPD that are being considered for temporary hazardous debris staging pads.
- Municipalities report a large amount of unauthorized, clandestine dumps in their communities. They are concerned with public health and environmental impacts. These dumps continue to be reported on October 17<sup>th</sup>.

#### **USVI Debris Recovery**

- USVI is allowing the burning of vegetative debris. USACE intends to segregate construction and demolition (C&D) debris prior to burn operations and VIWMA will handle the C&D debris.
- As of October 11<sup>th</sup>, EPA is planning for the transportation and disposal of stockpiled medical waste at the hospitals on St. Croix (50,000 lbs.) and St. Thomas (80,000 lbs.). The contract for repackaging, transportation and disposal of medical waste is anticipated to be awarded during the week of October 23<sup>rd</sup>.

#### **Orphan Container, Pollution Response and Vessels in PR and USVI**

- USCG has tentatively identified 266 sunken vessels in PR as initial targets for assessment. Data collection and reporting procedures are under development.
- In the USVI, EPA contractors continued inputting the vessel assessment info into Response Manager database. 71 targeted vessels have been identified to date.

#### **EPA Headquarters Significant Activities**

- The HQ EOC is activated to Level 1 in support of EPA Regions 2, 4, and 6 responses to Hurricanes Harvey, Irma, and Maria. For the Hurricanes Irma and Maria responses, the HQ EOC is coordinating on several levels with EPA Regions 2 and 4, and other Federal agencies. The HQ EOC deployed personnel to the FEMA NRCC's ESF-10 desk. EPA Senior Management on the Policy Coordination Committee (PCC) developed and issued senior management objectives that form the basis of field strategy and tactics in response to Maria and Irma.

#### **Other EPA Activities**

#### **OECA Civil/CID**

- EPA has received *force majeure* claims from:
  - PREPA regarding its compliance with certain requirements of a 1999 Clean Air Act consent decree;
  - PRASA, the P.R. Department of Transportation & Public Works and the P.R. Highway and Transportation Authority relating to those entities' compliance with existing Clean Water Act consent decrees with EPA;
  - Puma Energy Caribe, LLC concerning its compliance with a RCRA consent decree.
  - The U.S. Navy concerning compliance with the Federal Facilities Agreement regarding the Atlantic Fleet Weapons Training Area NPL site.
- Similar *force majeure* claims will likely be submitted by other parties with whom EPA has entered into consent decrees in Puerto Rico, including the Municipalities of San Juan and Arecibo.

#### **Communications**

- On October 16<sup>th</sup>, EPA Region 2 Administrator Pete Lopez arrived in PR and was interviewed by NBC Universal and *Metro PR*.
- On October 17<sup>th</sup>, EPA Region 2 Administrator Lopez met with Governor Ricardo Rosselló.
- Region 2 public affairs and CIC staff are addressing media and community outreach actions to warn the public about improperly accessing Superfund



sites.

- The EPA CIC for the Dorado Groundwater Contamination site spoke with local residents and they were aware that wells are associated with contamination at a Superfund Site but indicated a need for water.
- A video, entitled “Community Water Assessment Mission,” is now posted at <https://www.dvidshub.net/video/557519/community-water-assessment-mission>.
- The REOC and Field PIOs are working with reporters from the *Associated Press* and *El Nuevo Dia* to do stories on EPA’s work on wastewater and drinking water facility assessments, respectively.
- Bilingual Community Involvement Coordinators (CICs) are assisting the assessment teams in PR and USVI and will be supporting the Region 2 RA/DRA visit to the USVI on October 19<sup>th</sup>.
- Region 2, Region 4, and HQ activities related to Irma and Maria response efforts are available at: <http://www.epa.gov/hurricane-irma> and [www.epa.gov/hurricane-maria](http://www.epa.gov/hurricane-maria), respectively.

### **Congressional Inquiries**

- U.S. House of Representatives Speaker Paul Ryan, Resident Commissioner Jennifer Gonzalez, and members of the House of Representatives’ Appropriations Committee are traveling to PR on October 13<sup>th</sup>. The Speaker will participate in helicopter flight towards the west of PR, including the Guajataca Dam.
- Senior Leadership from EPA Regions 2, 4, and 6 appeared at a briefing for members and staff of the House Energy & Commerce Committee on Friday, October 13<sup>th</sup>. The purpose is “to articulate an assessment of the damage to air (RMP and NAAQS), drinking water, soil (including RCRA and CERCLA issues), progress made to remedy that damage, a plan to respond to such remaining damage, and any challenges to remediation.” State officials from Texas and Florida have been invited (but there is no indication that PR or USVI officials have been invited).